

Mentions-some readings of plural-marked questions: Experimental evidence

Despite the well-known fact that \diamond -questions admit both mention-some (MS) and mention-all (MA) answers (Groenendijk & Stokhof 1984), it's unclear (i) whether the acceptance of MS is purely decided by the goal behind the question (Dayal 1996; cf. Fox 2013) and (ii) why the plural-marked \diamond -question (1b) admits only MA.

- (1) a. Where can we get an Italian newspaper? (^{OK}MS, ^{OK}MA)
 b. At which places can we get an Italian newspaper? (# MS, ^{OK}MA)

We argue that the acceptance of MS is primarily contributed to by the weak modal, and that plural-marked \diamond -questions admit MS-answers naming non-atomic items. For instance, (1b) disallows MS because each MS-answer names only one place. While (2a) accepts the MS-answer (2b) which names the sum of two co-leaders.

- (2) a. Which children can co-lead the dance? b. Anna and Chloe can co-lead the dance.

Experiment: We ran a pilot experiment to compare the four question-types in (3) under four memory-types: fully *true*, *over-affirming* (believing a false answer), *under-affirming* (missing a true answer), and fully *false*. Crucially, accepting in the under-affirming condition reveals a mention-some reading of the question.

- (3) Mary remembers {who, which children} {wear one accessory in common, can lead the dance}.
 [-PL] [+PL] [- \diamond] [+ \diamond]

Participants, Materials and Procedure: 30 participants were recruited on Mechanical Turk (age range: 19-73; native language: English), 5 were removed from the analysis because their error rate exceeded 23% (Mean+SD). The instruction stipulated that Mary is in charge of choosing one or two children to lead the dance, and she knows that the dance can only be led by two children with one accessory in common. In each trial, participants were presented with pictures of four children and a short paragraph describing Mary's memory. Then they had to judge the truth value of an indirect-question (i.e. one possible combination in (3)).

Results and Discussions: The bottom right graph shows the percentage of "True" responses for each question under each memory-type. **First**, logit mixed models reveal that \diamond -questions were accepted more than other questions ($z = 2.6, p = .01$) under both over- and under-affirming (n.s. interaction, $z = .6$). **Second**, the acceptance rates under *under-affirming* are significantly higher than *over-affirming* ($z = 2.0, p = .05$). **Third**, no significant difference was observed between [-PL] and [+PL]. Given that all indirect-questions are evaluated with the same goal, we conclude that the acceptance of MS is primarily determined by the presence of \diamond in the question type, not the question goal. Plural-marked questions seem to allow MS answers as frequently as neutral questions, but one possibility is that the participants didn't pay enough attention to distinguish between the two.

Planned follow-up experiment: Make *wh*-phrase type a between-subject factor to avoid confusion between *who* and *which children*. Include cases where Mary overtly denies a true answer. Include singular MS-answers.

How children are dressed up:






Ann Bill Chloe Diana

Mary's memory:
*Bill and Chloe wear the same bow tie; Chloe wears a hat.
 Therefore Bill and Chloe can lead the dance.*

"Mary remembers which children can lead the dance."

False

True

